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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,912	01/18/2000	Shigeo Moriyama	29273/516	5646
26646	7590	07/19/2004	EXAMINER	
KENYON & KENYON ONE BROADWAY NEW YORK, NY 10004			NGUYEN, DUNG V	
			ART UNIT	PAPER NUMBER
			3723	

DATE MAILED: 07/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/462,912

Applicant(s)

MORIYAMA ET AL.

Examiner

Dung V Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-3 and 5-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Sandhu et al (USPN 5,975,994). Sandhu et al discloses a polishing apparatus 100 which imparts relative motion between a layer with concave portion and a convex portion on a semiconductor wafer 110 and a polishing tool 140 having a plane polishing surface to polish the surface of a workpiece 110 by the plane polishing surface of the polishing tool 140, comprising a dressing tool 170 having a plane dressing surface for forming a surface roughness on the plane polishing surface of the polishing tool 140, a first moving means 136d for imparting relative motion in a direction horizontal to the plane polishing surface of the polishing tool 140 between the dressing tool 170 and the

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polishing tool 140, a second moving means 166a for moving the dressing tool 170 in a direction vertical V_2 to the plane polishing surface of the polishing tool, a control means 180 for permitting to execute movement caused by the first moving means 136a while controlling a position of the second moving means 166a, wherein the polishing tool 140 is formed of abrasive grain and a material for joining and holding the abrasive grain, wherein the dressing tool 170 includes a plurality of kinds of hard grains, wherein the first moving means 136a moves the dressing tool 170 so that the dressing tool 170 moves on the polishing tool 140. Sandhu et al also discloses a method for manufacturing a semiconductor substrate 110 formed with an irregularity pattern to the polishing surface of a polishing tool 140 for relative motion comprising forming a surface roughness with a dressing tool 170 on the polishing surface of the polishing tool 140, during the polishing process, while controlling movement of the dressing tool 170 in a vertical direction with respect to the polishing surface (note Fig. 1, 2 and 3, col. 1, lines 38-60, col. 4, line 35 to col. 7, line 53).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sandhu et al in view of Southwick (USPN 5,782,675). Sandhu et al disclosed the claimed invention as described above, however, Sandhu et al does not disclose the hard grain is

diamond. Southwick discloses the hard grain is diamond (note col. 1, line 66 to col. 2, line 5). It would have been obvious to one having ordinary skill in the art at the time the invention was made to diamond in order to form a new and clean planarizing surface on the polishing tool.

Response to Arguments

6. Applicant's arguments filed 28 April 2004 have been fully considered but they are not persuasive. In response to applicant's argument that claims 1 includes the limitation "a control means for permitting to execute movement caused by said first moving means while controlling a position of said second moving means", claim 10 includes a limitation "a means for inhibiting movement of said dressing tool in a direction vertical to the polishing surface of said polishing tool" and 11 include a limitation "while controlling movement of said dressing tool in a vertical direction with respect to said polishing surface" that is not found in Sandhu reference, Sandhu reference discloses in column 5, line 13 to column 6, line 61 that a controller 180 for controlling an operating parameter of a dressing tool 170, in which the controller 180 controls movements of dressing tool 170 in both vertical and horizontal directions simultaneously, moving the dressing tool in vertical direction while holding the dressing tool in horizontal direction or moving the dressing tool in horizontal direction while holding the dressing tool in vertical direction. The controller disclosed by Sandhu reference performs the functions specified in the claims and is an equivalent of the means-plus-function limitation, therefore, Sandhu controller meets the claimed limitations in claims 1, 10 and 11.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).
8. A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dung V Nguyen whose telephone number is 703-305-0036. The examiner can normally be reached on M-F, 6:30-3:00.
10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph J Hail can be reached on 703-308-2687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DVN
July 15, 2004


DUNG VAN NGUYEN
PRIMARY EXAMINER